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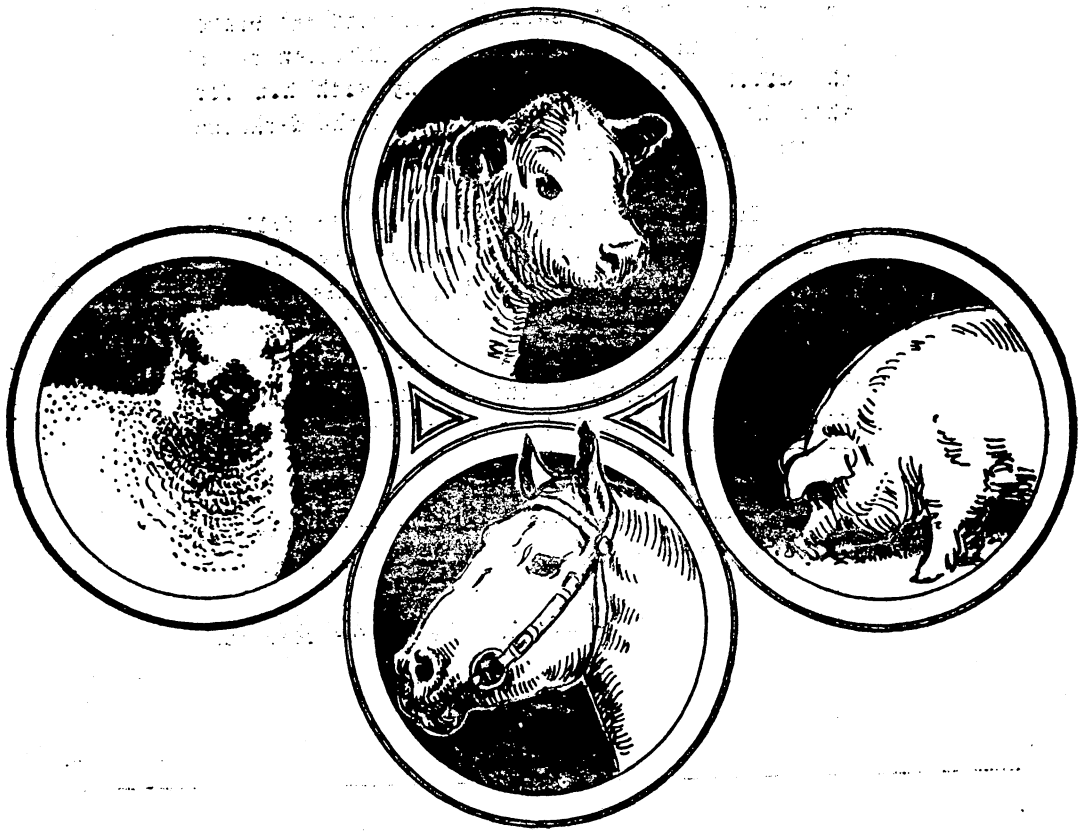
The EXTENSION ANIMAL HUSBANDMAN



UNITED STATES DEPARTMENT
OF AGRICULTURE
WASHINGTON,
D.C.

Serial No. 8 December, 1927

"LINDBERGH FLIES ALONE."

Alone?

Is he alone at whose right side rides Courage, with Skill within the cockpit and Faith upon the left? Does solitude surround the brave when Adventure leads the way and Ambition reads the dials? Is there no company with him for whom the air is cleft by Daring and the darkness is made light by Emprise?

True, the fragile bodies of his fellows do not weigh down his plane; true, the fretful minds of weaker men are lacking from his crowded cabin; but as his airship keeps her course he holds communion with those rarer spirits that inspire to intrepidity and by their sustaining potency give strength to arm, resource to mind, content to soul.

Alone? With what other companions would that man fly to whom the choice were given?

---Editorial - New York Sun

All communications in regard to this publication which is issued quarterly, should be addressed to:

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UNITED STATES DEPARTMENT OF AGRICULTURE

Washington, D. C.

THE EXTENSION ANIMAL HUSBANDMAN

Issued by the Bureau of Animal Industry and the
Office of Cooperative Extension Work Cooperating

Serial Number 8 -- -- December 1927

The Department requires that formal plans of work for each extension project be submitted to it for approval before federal funds are released for the promotion of the project. These plans of work also have other functions - chiefly to those who are directly responsible for the conduct of the activity in the field. For example, a properly prepared plan of work furnishes concrete evidence that someone has thought the job through step by step to the end. This alone is some assurance that results will not be disappointing.

It is not necessary nor even desirable that all plans of work be standardized completely, although they should be complete. Most of the plans of animal husbandry work that come in could be made better. Why not try to do it?

Enclosed with the copies of this issue of the quarterly which are sent to the subject-matter group is a copy of a plan of work submitted by one of the States. It is one of the better ones. Specialists are urged to compare it with what they are preparing. Perhaps it may give some help.

The Extension Handbook was distributed to all extension workers a few weeks ago. Suggestions and constructive criticisms of the animal husbandry section of it are earnestly solicited in order that it may be made more complete and useful as time goes on. Suitable binders for the loose-leaf edition may be purchased from the Sieber Products Manufacturing Company, 4000 Laclede Ave., St. Louis, Mo., at a cost of $1.25 each.

-- C. D. L.

FEDERAL RESEARCH IN SWINE PRODUCTION

By E.Z. Russell, In Charge, Swine Investigations,
Bureau of Animal Industry, U.S. Department of Agriculture.

Hogs are found on more farms in the United States than any other of the meat animals. Some years ago their production in large numbers was confined almost entirely to the Corn Belt. Now they are raised in considerable numbers for market in practically every State in the southeast and northeast, and even the big cattle ranges of the west are beginning to produce hogs. They are adapted to every climate. One will find as good hogs produced in the furthermost southern and northern parts of the United States as are grown in the Corn Belt.

The U. S. Department of Agriculture is conducting experimental work in the feeding, breeding and management of hogs at five stations, namely, Beltsville, Md; McNeill, Miss.; Jeanerette, La.; Ardmore, S. Dak.; and Miles City, Mont.

General Problems Being Studied

At the Beltsville station about 75 breeding sows are maintained of which practically all are bred for spring litters and about half the number for fall litters. The most extensive project at this station is the study of the causes of soft pork. It is rather definitely determined that the fat in the feed is the main cause of this condition. The feeds particularly studied at this station are peanuts and soy beans. The investigations are made in cooperation with some eleven State experiment stations. All hogs used in soft-pork work at these stations are slaughtered in the abattoir at the Beltsville station, where careful chemical and physical tests are made of the quality of the meat produced. An accurate record is kept of the feeds consumed by the hogs from the beginning of the gestation period of the sows and throughout the life of the pigs produced. Some of the experiments so far conducted indicate that the feeds given to the sow during the gestation period and even prior to that time may have some effect on the quality of the pork produced by her offspring.

From about 700 to 1,000 head of hogs are slaughtered each year in this work. It will readily be seen that where all the various cooperating stations are working closely together, duplicating the work only wherein it is deemed advisable, a great deal of data is accumulated through the large number of hogs used. Some positive conclusions already have been reached and much work is under way. It has been learned that where hogs that have obtained a weight of practically 100 pounds

before being placed on test are fed peanuts for about 8 weeks the carcasses will be soft or possibly oily. If they are fed for an additional 8 weeks on corn and tankage or other feeds of like nature the carcasses still will remain soft. In fact is is concluded that where hogs are fed on peanuts for 8 weeks as abowe stated they will not produce a firm carcass when fed on hardening feeds to a practical market weight.

Practically the same results have been obtained in the feeding of soy beans. The latter feed presents a problem more complex than peanuts due to the fact that there are some 20 to 30 varieties of soy beans that are quite extensively grown in various localities of the country, the oil content of which ranges all the way from 12 to 24 per cent. The production of soy beans has extended to nearly every part of the United States.

Another study being made at Beltsville is that of inbreeding. The project calls for brother-sister matings. About four years' work has been completed. Results are as yet indefinite and no conclusions have been issued.

Another study relates to the vitamin content of pork produced from hogs which are fed rations having different vitamin contents. The plan involves feeding the sow such feeds from the time she is bred, through the gestation and suckling periods and continuing the pigs on the same feeds until they attain slaughter weights. The meat of these carcasses is then tested for vitamin content by feeding it to small laboratory animals.

Another study is the simultaneous inoculation of pigs, which are suckling their dams, against hog-cholera infection. This work is being conducted with the herds at all the Government stations mentioned above. It has been under way about six years and is still under investigation. Some definite conclusions regarding this project will probably be published in the near future.

A cooperative experiment carried on jointly by the American Dental Association, the Department of Chemical Hygiene of the Johns Hopkins University and this Bureau has for its object the study of the effects on development of hard tissues of the bodies of animals which are deprived of certain mineral substances in their rations. For this purpose special equipment has been provided and suitable breeding animals secured purposely for this series of tests. The project will probably extend through a period of years.

At the Miles City, Mont. Station, a study is being made of the type of animals and feeds that can best be used for producing Wiltshire

sides acceptable to the English market. Chester White and Yorkshire hogs are being used for this purpose and they are being crossbred as well as straight bred. Various grain feeds including barley, oats and corn together with pasture and dry land feeding are being studied. The animals produced in this manner are shipped to St. Paul, Minn., for slaughter and such carcasses as are deemed suitable for Wiltshire sides are cured and shipped to England for sale.

Another problem which is of national importance being studied at Miles City is the comparative value of young and old sows for producing pigs for market. The plan involves the production of pigs from gilts bred to a young boar. One lots of gilts is produced from aged sows, the other lot from gilts. A third lot of pigs is produced from aged sows bred to an aged boar. Careful feeding data are kept on the various groups of sows during the gestation and suckling periods and on the pigs on test until the experiment closes. Slaughter data are also recorded on the pigs of the different lots.

Coastal Plain Section

The problems under consideration in this region are all studied at the McNeill Station. They involve pasturing the hogs on the various pasture grasses and feeding corn for the principal fattening feed. Some studies are being made in using field peas, that grow quite readily in the Coastal Plain country, as well as peanuts and soy beans About 15 sows are maintained at the McNeill station and bred for two litters a year.

Sugar Cane Belt

The work in this district is being done at the Jeanerette, La., Station where 10 breeding sows are maintained and from which two litters a year are obtained. The particular study under consideration in these experiments concerns the use of rice by-products such as brewers' rice, rice polish and rice bran. Some of the experiments already conducted show that rice polish and rice bran are producers of a soft quality of pork while brewers' rice produces pork even harder than corn or barley.

Dry Land District of the Northwest

The experiments in this section are all conducted at the Ardmore Field Station at Ardmore, S. Dak. About 20 breeding sows are maintained at this station where only spring litters of pigs are obtained. The question involved in the studies being made at this station is whether it will pay the farmer to grow his pigs on dry land alfalfa, feeding them a limited amount of corn per day from weaning time until they attain feeder pig weights of practically 100 pounds or to put them on a full feed of corn and tankage either in pasture or dry lot

until they attain a market weight of practically 200 pounds. This problem has been under consideration for some 4 or 5 years and will continue for some years to come. One of the main ideas is to compare these pigs on pasture during years when there is plenty of rainfall and good pasture with years of light rainfall and poor pasture.

Irrigated Districts of the Northwest

This work is being conducted at the Miles City, Mont. station, and involves practically the same plans as are followed at the Ardmore station except that during the pasture season the hogs are on irrigated alfalfa which without doubt is as good alfalfa as can be grown.

Careful record is kept of the market value of the hogs in all these various experiments at the time they are sold as well as dressing yields at the time of slaughter.

PERSONAL NOTES

S. F. Russell, for some years sheep specialist in Missouri, resigned on September 1st to accept the position of county agent at Quincy, Illinois.

M. B. Posson, Nebraska leader in animal husbandry extension resigned recently to accept the position of manager of a ranch in Dawes County of the same State. O. O. Waggener, livestock club specialist succeeded Mr. Posson.

B. W. Fairbanks, Colorado animal husbandry specialist resigned effective January 1st to accept the resident teaching position in the same State vacated by Dr. Chas. I. Bray, who is now head of the animal husbandry department of the Louisiana State University. L. H. Rochford, a graduate of the Kansas State Agricultural College and recently county agent in Alamosa County, Colorado, is succeeding Mr. Fairbanks in the extension field.

H. F. Moxley, who has been county agent in Labelle County, Kansas, becomes assistant animal husbandry specialist in Michigan on January 1st.

L. A. Kauffman, one of Ohio's animal husbandry specialists, on leave for the college year is taking advanced work at the Iowa State College.

THE NEBRASKA PIG CROP CONTEST

By. O. O. Waggener, Nebraska Extension Service.

The Nebraska Pig Crop Contest was instituted in 1926 as a sort of a climax to a five-year project of hog-lot sanitation. It entered its second year under the direction of Mr. M. B. Posson with 179 farmers competing for the much coveted documents of recognition, offered by the Agricultural College as a reward to any farmer in the State who could qualify as a "master" hog man by producing twelve hundred or more pounds of pork per sow in six months. These documents were first given out in the fall of 1926 when eight hog men in the State were able to prove they had produced the necessary poundage.

The records required of the contestants this year, consisted of a simple entry blank, a sow and pig identification card which included a record of feeds used during the gestation period, a feed record sheet, and a final report card. All computations were made in the central office by the pig crop contest clerk.

In spite of the simplicity of records the "mortality rate" on account of them was high. Out of 179 who entered only 73 sent in feed record reports. Many contestants refused to continue in the pig crop contest as soon as their pig average per sow dropped below six. Others discontinued their records because of disease caused from lack of proper sanitation methods. A shortage of feed in some sections combined with heavy death losses from cholera and other diseases accounts for the discontinuance of others. Some farmers finished all records but refused to send them in because they failed to rank with the winners. Of the entire number entered only 10 qualified for the documents of recognition.

The rules of the contest are embodied in the following which was circulated among our farmers:

CALL YOUR SOWS -- LOOK 'EM OVER
Then ENTER The
1927 PIG CROP CONTEST

WHAT IS IT? -(If you raise hogs, it is a contest between you and (other Nebraska hog men. The Agricultural College (wishes to especially recognize those farmers who can (raise an average of 1,200 pounds or more of pork from (each sow on their farms.

WHO CAN ENTER? — (YOU can, if you have six or more sows, and live (in Nebraska.

COST ANYTHING? — (It costs you nothing.

ARE THERE ANY PRIZES? — (Most certainly--if you raise 1,200 pounds of pork (per sow in 6 months the Extension Service of the (Nebraska Agricultural College will present you with (an official Nebraska Document of Recognition, a (prize you can't buy with money.

IS THAT ALL? — (No. The Nebraska Improved Livestock Breeders (Association will place a colored seal on your docu- (ment every time you raise 1,200 pounds or more of (pork per sow. If you raise 1,400 pounds or more per (sow you get a blue seal; 1300 to 1,400 pounds, a red (seal; 1,200 to 1,300 pounds, a gold seal.

HOW ABOUT RECORDS? — (It will take not more than ten minutes a week to (fill out the record blanks. Blanks will be sent to (you when reports are due. The records will be prac- (tical. You will not need to weigh the feed.

MUST THE PIGS BE MARKED? — (Only those raising purebred pigs for registry will (be required to ear mark the pigs.

HERD INSPECTION — (Within seven days after the last litter is farrowed (a committee made up of your County Agent, a disin- (terested farmer and yourself will count all sows and (litters and fill out the farrowing record sheet. With- (in seven days after the pigs are six months old the (committee will again count the pigs and determine (their average weight. Their findings will be report- (ed on the Final Record Sheet. Where there is no (county Agent, the contestant's banker will serve on (the committee.

HOW TO ENTER — (Get an entry card from your County Agent or write (to Pig Crop Contest Clerk, Agricultural College, (Lincoln, Nebraska, asking for one. Remember your (herd must be entered before the first sow farrows.

A compilation of the records of the ten successful contenders indicates that each followed a strict system of hog lot sanitation, immunization against cholera, fed well-balanced rations, and made proper use of some good hog pasture. Their results are as follows:

1927 NEBRASKA PIG CROP CONTEST

NAME	BREED	NO. SOWS	PIGS FARROWED	PIGS RAISED	AVERAGE LITTER WEIGHT	RATIONS USED
C. F. Eshelman, Webster County	Duroc Jersey	14	130	111	1570	Corn, shorts, alfalfa meal, tankage, cottonseed cake, salt, rye and alfalfa pasture.
John W. Stahly, Seward County	Duroc, Poland China	7	70	49	1437	Corn, oats, bran, skim milk, pig meal, hominy feed, tankage, protein supplement, wheat and alfalfa pasture.
P. J. Beyer, Cheyenne County	Poland China	29	264	225	1435	Corn, oats, barley, tankage, skimmilk, rye, pig meal, and alfalfa pasture.
Louis Egr, Saunders County	Hampshire	5	36	34	1428	Corn, oats, pig chow, and alfalfa pasture.
E. F. Becker, Clay County	Chester White	7	88	58	1415	Corn, oats, shorts, tankage, pig meal, alfalfa meal, salt, minerals, alfalfa pasture.
Fred Neuman, Colfax County	Spotted Poland	7	44	43	1321	Corn, oats, skimmilk, salt, tankage, cottonseed cake, and sweet clover pasture.
S. B. Hopkins, Cheyenne County	Duroc Jersey	16	120	98	1317	Corn, skim milk, tankage, grass, oats, and Sudan pasture.
Ernest Schmidt, Dodge County	Spotted Poland	15	133	102	1292	Corn, oats, buttermilk, sweet clover, rye and oats pasture.
Emil J. Younglund, Polk County	Spotted Poland	14	102	88	1257	Corn, oats, oil meal, tankage, buttermilk, ground barley, pig feed, and alfalfa pasture.
W.D. Potter & Son Hamilton County	Duroc & Sp. Poland	15	153	88	1202	Corn, oats, shorts, tankage, cottonseed meal, sugared hog feed, and alfalfa pasture.

10 FARMS:

Average feed and labor cost per cwt. of all pork produced	$ 5.59	
" cost per pig	10.99	
" weight of all pigs raised at 6 months of age	196.5	lbs.
" " " " litters produced	1364.7	"
" number of sows per farm	12.9	
" " " pigs farrowed per sow	8.8	
" " " " raised " "	6.9	
" percentage of farrowed pigs raised	78%	

The results obtained by all contestants, including the ten winners, should rank well up with, if not above, those obtained by the average of the best hog producers in the State.

36 FARMS:

Average feed and labor cost per cwt. of all pork produced	$ 6.32	
" cost per pig	10.56	
" weight of all pigs raised at 6 months of age	167	lbs.
" " " " litters produced	1031.6	"
" number of sows per farm	11.8	
" " " pigs farrowed per sow	8.2	
" " " " raised " "	6.2	
" percentage of farrowed pigs raised	76%	

To those accustomed to ton-litter figures these results will seem surprisingly low, but our farmers maintain that an average such as is listed above is far from easy to obtain.

The high percentage of contestants who entered but dropped out because of poor averages, coupled with the low percentage, who by careful management obtained sufficiently good results that they were not ashamed to report them, would tend to indicate:

1. That the greater part of Nebraska's hog producers are obtaining on the whole very inefficient returns from the sows they farrow.

2. That for the most part these hog producers are not aware of the low average results they are getting.

3. That careful and improved methods of managing the herd can materially improve these results.

4. That some project such as the one just reported that will encourage the hog man to keep sufficient records to realize the poor results he is obtaining, as well as impress him with the fact that better results are being obtained by some of his neighbors, is a good thing.

If you have knowledge, let others light their candles at it.

--- Margaret Fuller.

THE MISSOURI HOG PRODUCTION CONTEST

By J. W. Burch, Missouri Extension Service.

During the years 1924, 1925 and 1926 the Animal Husbandry Extension Department in Missouri carried on a ton-litter contest. This contest was patterned somewhat after the Indiana ton-litter contest and very much the same as the contests carried on in other States.

Although we realize that this contest has helped us a great deal with our extension work with hogs, after three years of this work we felt the need of a little different kind of a project. In analyzing our results work we found that we were reaching more of our boys and purebred breeders than we were actual commercial hog producers who were handling hogs on a big scale. In talking with men who were really making money out of producing commercial pork, we found them hesitating to take one sow and her litter and set them aside and give them the extra attention necessary to win in a ton-litter contest. These were the very men whom we were anxious to reach because they represent the backbone of the hog-producing industry in this State. As a consequence we started the Missouri Hog Production Contest.

In making up the rules for this contest we had to establish some rather arbitrary requirements. The only guide we had to go by was the result of our ton-litter work and the work that Nebraska had done along this same line. The rules that we used are as follows:

Eligibility - Any hog producer in Missouri who has three or more sows farrowing is eligible to enter the contest.

Date of Farrowing - Sows must farrow between February 1 and April 15 for the herd to enter this contest.

Awards - Gold medals will be given to those men whose entire pig crop makes the following average weight per litter, 180 days from the average farrowing date of the entire lot.

Weight Requirements - The contest was divided into four sections. Those men owning 15 sows and over must produce 1,400 pounds of pork per litter. Those owning 10 to 14 sows, inclusive, must produce 1,500 pounds of pork per litter. Those owning 6 to 9 sows, inclusive, must produce 1,600 pounds of pork per litter. Those owning from 3 to 5 sows inclusive, must produce 1,800 pounds of pork per litter.

Marking of Sows and Pigs - Each sow must be earmarked and her litter given a corresponding mark. A copy of this marking entered on the back of the enrollment sheet must be turned in to the County Agent or to the Animal Husbandry Extension Department within ten days after

the last litter is farrowed. This marking is to make possible proper culling of the sow herd at the close of the contest.

Entry - The turning in of this marking shall constitute an official entry.

Inspection - All herds shall be inspected by the county committee before June 1.

Final Weight - The weighing date shall be 180 days from the average farrowing date of the herd. The final weight may be taken at any time within 5 days of the exact date and the weight corrected for contest purposes on the basis of 1.75 pounds per pig per day. The number of pounds of pork per sow shall be arrived at by taking the total weight of the pig crop and dividing by the number of sows farrowing pigs.

Feed Record - A feed record shall be kept of the feed eaten by the sows and pigs from farrowing to weaning time and by the pigs from weaning until weighing date. Blanks will be furnished for this record.

Method - The Missouri College of Agriculture will furnish plans on prevention of worms and economical feeding where these plans are desired.

State Committee - The State Committee shall have charge of the contest, interpret the rules, decide questions not covered by published rules and make and publish the final awards.

The above rules are self-explanatory. Our thought in making the four different classes was that it would be just as easy for a man owning from 3 to 5 sows to make 1,800 pounds of pork per litter as it would be for a man owning 15 sows to make 1,400 pounds of pork per litter. In looking over these class divisions it will be noticed that in the 3 - 5 sow group the 1,800 pounds per litter would be the same as 9 pigs that average 200 pounds each when 180 days old. Likewise, in the group of 15 sows it would be necessary to have an average the equivalent of 7 pigs per litter that would average 200 pounds per head when 180 days old.

We insisted on an accurate record. This made it possible to use these contestants for demonstration purposes. We do not think that this contest would be worth while unless accurate feed records were kept. Every man that went into the contest this year was used as a demonstration of proper sanitation and feeding practices.

By having the sows and their respective litters earmarked it makes it possible at the close of the contest to pick out the sows that have really produced a large amount of pork. It makes it possible to

go through and cull out the sows whose pigs have not responded to feeding as they should. In other words, it makes it possible to apply a cow testing record on the sow herd.

There were 52 entries in the contest and 6 of them made the necessary weight per litter to win a medal. In the 15-sow-and-over class a man with 21 sows produced 9.3 pigs per litter that averaged 1,675.6 pounds per litter at an average age of 180 days. These pigs consumed the equivalent of 5.6 bushels of corn and 16.5 pounds of tankage, for each 100 pounds of gain with 35¢ per hundredweight charged for pasture making a feed cost of $6.41 per hundred pounds gain. Another man sold 207 pigs from 25 sows with an average weight of 1,498 pounds per litter. His feed cost per 100 pounds gain was $7.26. In the 10-to-14-sow class one man with 12 sows produced 1,508 pounds of pork per litter, he had 7.6 pigs per litter of 91 head in all that averaged 199 pounds per head when 6 months old. With corn at $1.00 a bushel his feed cost per 100 pounds gain was $7.05. He used corn, shorts, tankage, oil meal and a small amount of skim milk. Another man in this same class with 10 sows produced 1522 pounds of pork per litter, using 6.2 bushels corn and 25 pounds of tankage in addition to pasture for each 100 pounds gain. His cost per hundredweight for feed was $7.11. In the 6 - 9-sow class the successful contestant had 8 sows that averaged 1,632 pounds of pork per litter at the end of 180 days. In the 3 - 5-sow class only one man made the required weight. We thought his record rather remarkable so we will give part of it in detail.

He had 3 purebred Poland China sows which were crossed with a rather close-made purebred Duroc boar. He marketed 33 pigs from the 3 sows that averaged 228.6 pounds per head at 180 days from the average farrowing date of the three sows. To win a medal each litter needed to weigh 1,800 pounds and they actually averaged 2,514 pounds per litter. The cost of feed per hundred pounds gain was $6.03. The feed used for each 100 pounds gain was 3.81 bushels of corn, 69.3 pounds of shorts, 22.6 pounds of oil meal and tankage and pasture that was charged at 30¢ per 100 pounds gain. The pigs made an average daily gain of 1.27 pounds from birth until they were six months old.

These pigs were sold in St. Louis on September 6 at $11.70 per hundredweight, netting him $11.00 per hundredweight at home or a total of $829.73. The total cost of the feed and pasture given the sows and pigs was $454.85 leaving a return above feed cost of $374.88 or $124.96 per sow.

Everyone of the above men made excellent demonstrations. The great majority of the men who started in the contest and did not make the required weight kept their records right on through and were used by the county agents in the various counties as demonstrations of sanitation and feeding methods.

While we only had a few men making the required weights this year, we expect to use the same requirements next year and look upon this

contest as the best kind of a contest from a practical standpoint that we have used.

Medals are given by the Kansas City, St. Louis and St. Joseph stock yards companies and in addition the Kansas City Chamber of Commerce gave $100 for what they call the Champion Hog Producer of the State, this prize being awarded to the first man mentioned in the list who produced 197 pigs from 21 sows.

We would welcome very much any suggestions that any of the other States may have to make on this kind of a contest.

HOW MINDS WORK

"Let two men engage in a political argument. Seldom is either convinced. On the contrary, each goes away more than ever certain that he, himself, is right.

Women consider such arguing a weakness of men. Their belief that it is futile is correct. Why this is so is explained by the French psychologist, Gustave Le Bon.

He says the convictions of an electorate are not created by reasoning or argument, but by four other methods. These are: Affirmation, repetition, contagion, prestige.

One person, simply by affirming his opinion does influence another. The simpler and more concise his declaration the greater its influence. Repetition of an opinion on many occasions makes it more convincing. This is well known to all experienced writers of advertisements.

A person tends to be convinced by the fact that many about him hold an opinion. It is a form of imitation. But imitation must be easy. The thought must be easily grasped. That's why ideas which seem strange win little support, and those who present them are said to be "in advance of their time."

Prestige, the fourth influcence, is sometimes personal, sometimes acquired. Many classic books have such prestige. They are thought to be fine, even by persons who, if they attempted to read them in this day, would be bored. The moment the merit of a person or idea seems questionable the prestige is lost.

Many have used all this as an argument against popular government. That argument is false. For the political convictions of the most highly educated are formed in exactly the same way as the convictions of the uneducated."

--- Clipped.

IOWA PIG CROP CONTEST

By Rex Beresford, Iowa Extension Service

In producing 1,930 pounds of pork per sow from each of eight sows in six months' time, Adolph Larson of Washington County, is declared Iowa's champion pork producer in 1927, winning over about 250 hog raisers who entered the contest. A cash fund of $1,000 was divided among the ten high men, Mr. Larson getting $200 as his share.

The contest has created wide interest and it is planned to repeat it next year.

The rules and conditions under which the contest was conducted were as follows:

Eligibility - Any hog grower residing in Iowa who has eight or more sows farrowing.

Enrollment - Entries must be made with the county agent before the first sow farrows.

Identification - All sows actually farrowing must be ear marked. Pigs must be marked within seven days following farrowing with same mark as dam.

Date of Farrowing - Must be between February 15th and June 1st but in any one herd not more than 40 days between time the first and last sow farrows, will be allowed.

Inspections - All herds entered and eligible for award must be inspected by the county committee within one week following farrowing of last litter. All pigs must be weighed within 5 days from the date they are 180 days of age on the average and weights corrected on the basis of 1.75 pounds per pig per day depending upon date.

Feed Record - An approximate record of feeds used must be turned in before herds will be considered for final awards. There is no restriction on the use of any feed or feeding method.

Selling - The pigs may be sold at any time or at any market after final contest weights have been taken.

Basis of Award - The contest will be decided on the basis of the greatest number of pounds of pork produced per sow, by taking the total number of pounds of hogs produced at 180 days of age and dividing it by the number of sows farrowing pigs.

The statistics on the 31 highest ranking contestants are included in the following table:

Name & county	Breed	No. of sows	No. of pigs farrowed	No. of pigs weaned	No. of pigs weighed	Av. pigs per sow	Av. weight per pig	Pounds of pork per sow
Adolph Larson, Washington County	Poland China Spots	9	112	90	85	9.44	204.4	1,930.5
Morton Emde, Washington County	Duroc crossbreds	12	-	100	93	7.75	226	1,751
John Redfelsen, Clinton County	Duroc	12	99	98	98	8,16	203.5	1,663
A. Meyers, Fayette County	Poland China Duroc	8	66	66	64	8.	207.5	1,660
Frank Swatosh, Poweshiek County	Duroc	13	118	-	109	8.38	194.5	1,631
Dave Fausch, Story County	Chester White	13	164	118	105	8.07	194.2	1,568
Roy Mount, Madison County	Chester White	23	252	192	192	8.3	179.8	1,501
Chas. Baskerville, Calhoun County	Duroc	11	109	86	84	7.63	195	1,492
Karl Erb, Clayton County	Duroc Poland China	8	74	54	54	6.75	215	1,452
A. J. Hansen, Blackhawk County	Duroc Tamworth	20	223	190	177	8.85	157	1,392
Christensen Bros., Hamilton County	Duroc Tamworth	26	-	-	198	7.46	182.75	1,388
E. C. Schilders, Poweshiek County	Duroc Poland China	12	128	107	103	8.58	154	1,324
Elof Carlson, Ida County	Chester White	8	78	63	63	7.87	166.9	1,314
H. E. Barringer, Palo Alto County	Duroc Tamworth	23	219	190	180	7.82	161.3	1,262
E. C. Schilders, Poweshiek County	Duroc Poland China	14	145	112	109	7.78	157	1,257
J. L. Frederick, Humboldt County	Poland China	11	73	72	72	6.54	183	1,198

Name & county	Breed	No. of sows	No. of pigs farrowed	No. of pigs weaned	No. of pigs weighed	Av. pigs per sow	Av. weight per pig	Pounds of pork per
Roy Copp, Carroll County	Chester White	17	175	133	133	8.4	140.5	1,180
F. R. Mitchell, Hardin County	---	24	-	177	177	7.3	156	1,139
Conrad Peters, Buena Vista County	Hampshire	20	186	-	133	6.65	168	1,113.5
Carl Erickson, Buena Vista County	---	16	-	103	103	6.4	159.5	1,031
E. E. Tracy, Chickasaw County	---	12	71	67	67	5.6	183	1,023
C. P. Johnson, Buena Vista County	---	15	150	102	102	6.8	160	1,020
B. C. Chambers, Osceola County	Chester White	12	92	74	71	5.9	169	1,000
Merle Holland, Lyon County	Durocs	21	187	160	144	6.86	142.8	979
O. N. Baker, Calhoun County	Durocs	9	-	-	65	7.2	132.3	956
Grant Brothers, Calhoun County	Durocs	11	87	-	65	5.9	161.5	956
H. M. Buck, Adair County	Hampshire	14	103	90	87	6.2	146	905
J. S. Clarke, Boone County	Durocs	25	255	126	123	4.9	175	863
Otto Schouboe, Shelby County	Chester White	26	-	-	177	6.8	130	848
J. McCarrville, Webster County	Chester White	16	-	-	112	7.	116.5	818
H. W. Sierk, Scott County	Hampshire Poland China	23	166	145	145	6.3	126	794

OHIO SWINE SANITATION SPECIAL

By Paul Gerlaugh, Ohio Extension Service

Fifteen Ohio county agents advertised for the "runtiest" pig in their county. Whether they obtained their goal nobody knows, but they obtained many specimens that had the "earmarks." These pigs were "posted" as a part of the program of the "Swine Sanitation Special" which the Baltimore and Ohio Railroad operated in cooperation with the Ohio State University in June, 1927. Fifteen counties were visited.

Ohio has been working on the Swine Sanitation project for five years. Each year has seen additional counties working on the project and an increasing interest in the work. Twelve of the counties visited by the train had previously adopted the project and had demonstration farms in the county.

Two exhibit cars and one lecture car made up the educational part of the train. One of the exhibit cars was a flat car on which had been built three pens and a roof. In one of these pens was a litter of pigs six months old, averaging about 45 pounds, and showing the results of filthy quarters and poor feeding.

In contrast to this, a litter of ten pigs was obtained from Wm. Taylor of Butler County who has been a demonstrator in this project for five years and a successful ton-litter producer each year. This litter averaged fifty-eight pounds and was 75 days old when the train started out.

A brood sow and her litter of eight, three-weeks-old pigs, filled the third pen. Starting in advance of the train a pig was treated with infective ascarid ova so that at each stop the pneumonia and the thump stages were noticeable in certain pigs. This litter of pigs furnished a very convincing demonstration of the lung stage of the roundworm's life cycle.

In the other exhibit car were shown specimens of various internal parasites of swine. The life cycle of the round worm, the results of roundworm infection, the various steps recommended for roundworm control and results of practicing the control measures were shown graphically by charts and specimens prepared by the U. S. Department of Agriculture.

Near a window in this car was placed a table with two microscopes. Under one microscope were shown eggs like those used to infect the pigs shown on the flat car. Under another microscope roundworm larvae from lung tissue were shown.

The Ohio Experiment Station furnished pictures and statements relative to results they had obtained in protein supplement and mineral

feeding work. These were placed in the exhibit car together with rations which were recommended.

Dr. H. B. Raffensperger of the Federal Department was the headliner on the program held in the lecture car and reached the overflow by means of loud speakers. Dr. Raffensperger told the story of the life cycle of the roundworm, and the practices which will produce worm-free pigs.

O. K. Quivey, General Agricultural Agent of the Baltimore and Ohio Railroad discussed "The Railroad's Interest in Agriculture" and a representative of Ohio State University discussed "Protein Supplements and Mineral Feeds." The runty pig was shown before and after post-mortem.

On the afternoon of the first day the train stopped at Mt. Sterling located in densely populated hog territory. The train created so much favorable comment that the banker asked the county agent to arrange for a return engagement. This was arranged for the afternoon of the last day and another large crowd was out to meet the train. Many returned to see how the litter of infected pigs were getting along. They found different pigs "thumping" and the ones which "thumped" when the train stopped before, were recovering from a serious handicap. Their number had been reduced by one, and all had the "kink" removed from their tails.

The phrase "A Wormy Pig Will Never Get Big," coined by R. S. Allen of the U. S. Department of Agriculture was the slogan of the tour, and was vividly impressed upon the minds of hundreds of hog farmers.

Then It Ain't the Pig, My Friend,
It's You!

If you've got pigs--and they're full o' worms;
Th' creepin', crawlin' kind that squirms,
And you think sometimes it's devilish queer
That yer pigs ain't doin' well, this year,
And you notice yer pigs air always poar,
Though they eat like hell and squeal fer more.

They ain't no use ter raise sech a clatter
When yer conscience tells ye what's the matter,
Why don't ye face it right out like a man
And control these worms as best ye can,
But, if that much ye jest won't do,
Than it ain't the pigs, my friend, it's you.

--- Alexander Short.

MINNESOTA PORK PRODUCTION CONTEST

By H. G. Zavoral, Minnesota Extension Service.

Minnesota has carried on the ton-litter contest for the last five years. During that time swine growers of the State made several world's records. It has produced: The first two-ton Duroc litter, the heaviest litter of Spotted Poland Chinas and a Chester White litter with the heaviest average weight per pig. These records have all since been broken by other States. The ton-litter work has been a very important swine extension project. It gave the extension man a contact with over 200 swine producers each year. During the season several circular letters on feeding and management of hogs are sent to all contestants. A good many direct questions on hogs are received from these men. Many ask for hog bulletins. The list of contestants has been used as a mailing list for the Swine Feeders' Day at the experiment station, and a large percentage of those in attendance are ones enrolled in the contest.

The results of the contest are sent to every one enrolling. Many inquiries come in regarding the methods of feeding used by the winners. We have men who have entered the contest for the fifth time. There is a decided change in their methods of raising hogs, that is, in the selection of better breeding stock of improved type; feeding of better rations during gestation and suckling periods to insure larger, stronger, and more vigorous litters; control of disease and parasites by observing strict sanitation. The McLean County system of raising hogs has been practiced by most of the contestants. This last factor had much to do in changing of pastures and providing more legume forages. Many farmers state that their entry in the ton-litter work has changed their system of raising hogs. The extension specialist can use local examples in almost any part of the State. Before the contest, many would say, "It can't be done."

The ton-litter work provided an advanced project for the boys' and girls' clubs. Of the 170 enrollments for 1927, 63 are 4-H club members. It is necessary that club members keep records of the cost of feed.

An outgrowth of the ton-litter contest is the Pork Production Contest. Credit for starting this contest goes to M. B. Posson, State extension agent of Nebraska. There were objections raised that farmers take only one litter and give them exceptional care. To overcome this criticism, the ton-litter method was applied to every sow on the farm. If properly nominated, the litters in the Pork Production contest compete in Ton-Litter Contest. The object of the new contest is to locate the most efficient producers of pork and to demonstrate the most effective methods of breeding, feeding

and management. The entries closed June first with 44 enrollments. Several dropped out during the season, giving as their reason the shortage of feed and a poor prospect for a corn crop. Present indications point to about 20 finishing. The contest is proving to be a good one and will be emphasized next year. The entire herd idea appeals especially to market hog producers.

Men who finished the contest in September and October are pleased with the prices they received for their hogs. Prices are $4.00 a hundred lower at the present time. Statistics show that hog prices are on an average 12 to 16 per cent higher in September and early October than they are in November and December. One of the outstanding reasons for pushing this contest another year is that it teaches business principles in the production of hogs. Farmers mark their sows, keep track of breeding dates, save a larger percentage of pigs, mark each litter, improve their rations and know what it costs them to produce a pound of pork.

The rules and regulations for the 1927 contest are as follows:

1. ELIGIBILITY - Any Minnesota hog grower having five or more sows farrowing within a period of 42 days may enter this contest, providing that ALL sows on the farm farrow within this period.

2. DATES OF FARROWING - All sows must farrow on or after February 20th and before June 1st. Every sow farrowing living pigs must be included.

3. ENROLLMENT - Everyone entering this contest must enroll on a special enrollment card before the FIRST sow in his herd farrows. Enrollments must be made with the county agent, club leader or the extension division of the University of Minnesota.

4. IDENTIFICATION - All sows must be marked for identification. The pig must be ear notched within 7 days after farrowing, the system outlined in these rules being recommended. All pigs from one litter must be similarly marked and each litter must be marked differently.

5. INSPECTION - Each herd entered in contest must be inspected by the county agent or by two disinterested parties within 7 days after the last sow farrows. This inspection will report date of birth, ear marking and total number of pigs of every litter.

6. WEIGHING - Within 4 days of the time the pig crop averages 180 days of age, the total weight of the pigs must be determined. Wherever possible ALL pigs should be weighed. If this is impossible at least ten representative pigs must be weighed to get an average. If not weighed at 180 days of age the gain for the variation in age should be prorated at the rate of 1.75 pounds per pig per day.

7. FEED RECORDS - Contestants shall keep a record of the kinds and approximate amounts of feed fed to pigs from farrowing time until the average age of 180 days is reached. This report shall include feed given sows from farrowing time until pigs are weaned.

8. AWARDS - The basis of awards will be the average number of pounds of pork proudced per sow.

9. PRIZES - Liberal cash prizes will be given to at least 10 of the contestants having the highest average weights of pigs per sow.

10. The rules of this contest and prizes to be awarded are approved by the Minnesota Pork Production Committee.

TO A SMALL PIG

Oh, infant pig, all pink and white,
Asleep within your sty,
In adolescence you delight
The passing stranger's eye.
While you are young, and life is new
It's difficult to see,
What time your pudgy form we view,
The thing you're going to be.

But what a change will soon appear;
No longer you'll be white,
But caked with mud. Those eye will leer
With brutish appetite.
If we should visit you next May
We'd gaze with eyes agog,
And then we'd swiftly turn away
And mutter, "Ugh! A hog!

Yet through the cycles you will move
Propelled by some strange force,
As, each within his separate groove,
All creatures take their course.
You will not always need to dwell
Within that porcine slum;
For all the indications tell
Of better things to come.

And when the blazing Yule fires burn
And snows fall o'er the plain,
You and your brother hogs will learn
You have not lived in vain.
As when a piglet, you'll delight
The hungry eyes of men,
And be a fair and goodly sight,
For you'll be sausage, then!

--- James J. Montague.

In Ireland the hog's merits have always been recognized. In that country he is known as "The gintleman that pays the rint." "By all means kape a pig," is the advice the Irish give. "He'll ate what you won't ate, an' thin yez can ate him."

SUMMER FINISHING OF CATTLE WITH GRAIN

By L. A. Richardson,
Tennessee Extension Service.

Farmers who supplemented their pastures with grain in Tennessee during the grazing season just closed were well rewarded for the bit of grain added. This concludes the fourth successful year of grass grain finishing under Tennessee conditions. This method of production was begun seven years ago, but in reality did not register much success until within the past four years. It required some three years to iron out a few pitfalls which were encountered from a feeder and a market point of view.

This type of finishing has appealed to the farmers who formerly produced feeder cattle. In their respective sections, grazing as a rule is abundant and the acreage devoted to grain limited. The production of feeder cattle has netted too small a return in recent years to the farmer engaged in that type of livestock farming.

The 1927 season has been successful from many angles. In contrast to the four carloads of cattle produced four years ago, some twelve hundred head have been finished and put on the market this year. Cattle, which because of their grade, would have registered $7.75 to $8.50 per cwt. this fall as feeders have sold from $10.50 to $13.00 per cwt. in July, August, September and November. As a matter of fact these same cattle were put in a year ago at $6.00 to $7.50 per cwt. While reports from all the demonstrations have not been compiled, those at hand would indicate a net sale at the farm of a strong $10.75 to $11.00 per cwt.

In addition to the pasture these cattle received, on an average, nine pounds of corn, cob and shuck meal, plus 1½ pounds of cottonseed meal per day. As a rule they were turned to grass on April 20 and continued on pasture from 100 to 135 days, the average being 125 days. During that time the cattle were fed once a day and that in the evening.

The gains made during the period have varied from 200 to 400 pounds, one lot making a gain of 430 pounds. The average was 320 pounds, or 2.55 pounds daily. This provides a striking contrast with the gains made on grass alone by cattle being produced for the feeder market. During the normal grazing period of 175 days these cattle will not put on 300 pounds in weight.

The variations in total gain has been governed largely by the

quality of the pasture. In most instances the older steers fell short of the younger cattle. Another factor which influenced the total gain was that of the wintering of the cattle. Farmers who fed during the winter with a view to putting on 40 to 75 pounds gain had the larger returns on grass. Those cattle receiving a ration which enabled them to put on over 100 pounds during the winter failed to register the gross gain as compared to the cattle carried through on a little better than a maintenance ration.

The past grazing season has been conducive to good gains. There has been ample moisture to keep the pasture in good condition. This, coupled with a cool summer has proved a very favorable year for making beef.

The cost of gain per cwt. varied from $5.25 to $9.04 on all classes. The older and heavier steers cost $8.00 to produce 100 pounds of beef, while the younger cattle averaged from $7.00 to $7.50. The heavier cattle would average 1,050 pounds upon going to grass in April and finished from 1,250 to 1,375 pounds. The younger steers weighed between 800 and 900 pounds and finished under 1,250 pounds.

In compiling the cost of production, pasture was rated at 5 cents a day, corn varied from 70 cents to $1.00 per bushel and cottonseed meal $34.00 per ton.

A year ago seven loads of cattle were started on grain while on pasture the last half of the grazing season. These cattle were finished for the late fall and early winter market. The results were so encouraging that some twelve loads which would have gone into feeder trade this fall have been finished. Grain was added in August and early September. In addition to a daily gain which registered better than 2 pounds, the price received on the loads which have gone to market has averaged $2.50 per cwt. over that bid on the same grade of cattle as feeders.

Of the summer-finished cattle 70 per cent were marketed by the farmers direct.

The returns have been much more satisfactory to the feeder as compared to sales at the farm. This may be illustrated in the case of one farmer who sold two loads of finished cattle at the farm for $11.00 per cwt. These steers sold on one of the Ohio River markets the following week at $12.50 for one load and $13.00 for the other. On 1,200 and 1,300 pound cattle this buyer made a very satisfactory profit. This case is typical of the majority of farm sales.

The present interest would indicate that grass-grain finishing in Tennessee has been definitely established. The returns each year have proved more attractive than either winter feeding or the production of feeder cattle.

Beef Cattle

Until recently the beef business has been at low ebb in the range country, due to unsatisfactory prices and high operating costs. There is at present renewed interest and considerable speculation in beef cattle and it was around this condition, that the beef exhibit was built. In brief, we were attempting to get across the idea that Montana needs no more buckskins, speckles or brindles, but the increase should be in the production of quality cattle only.

Exhibit No. 1 - Three generations of cattle to show the improvement by the use of a good purebred bull. The original cow was a brindle, her daughter a good solid-colored red, and the grandson a choice steer calf.

Exhibit No. 2 - Four yearling feeding steers to illustrate the market grades of choice, worth 10-10½ cents a pound; good, from 9 - 10 cents; medium, from 7 3/4 - 9 cents; and a strictly inferior steer worth practically nothing as a feeder. The quotations were from Chicago at the time of the operation of the train.

Exhibit No. 3 - A prime two-year-old purebred steer to illustrate the finished product when choice feeders are used.

Exhibit No. 4 - A registered Hereford bull twelve months old weighing 1,025 pounds. This animal illustrated the type necessary to give earlier maturity and a quicker turnover to the beef business.

Sheep

Exhibit No. 1 - Three generations of grade Rambouillet ewes to demonstrate the value of a good sire. Accurate data on the shearing and body weights were available to show the increased production.

Exhibit No. 2 - Four crossbred ewe lambs from the U. S. Sheep Experiment Station, Dubois, Idaho. A Corriedale, Columbia, first cross Lincoln X Rambouillet and a "comeback" or three-quarter Rambouillet. There has been a good deal of inquiry in regard to increasing the length of staple and these lambs illustrated what might be done.

Exhibit No. 3 - Four Rambouillet ram lambs, one of which was of the desirable type, one a short staple fleece, one lacking in uniformity of fleece and one lacking in density.

Exhibit No. 4 - A "tagged" ewe to show the proper procedure in tagging before lambing time as an aid to larger lamb crops, cleaner wool clip, and the prevention of blow flies.

The ram lambs were handled by a 4-H club team in a demonstration on "Selection of Rams." The influence of length of staple on the amount of clean wool produced was illustrated by the short-stapled lamb and substantiated by data from the Dubois station.

Swine

Four spring pigs were taken from the college herd by Dr. W. E. Joseph and carried through the summer on test for 85 days. Each pig illustrated a common method of producing spring pigs in Montana. The average weight at the start of the trial was about 43 pounds.

No. 1 was carried on alfalfa pasture only and gained 15 pounds at a cost of $5.83 per hundred.

No. 2 was carried on alfalfa pasture, 1½ pounds of rolled barley, 2 ounces of meat meal, and gained 78 pounds at a cost of $3.83 per hundredweight.

No. 3 was kept in a dry lot and self-fed rolled barley, and gained 60 pounds at a cost of $7.41 per hundredweight.

No. 4 was run on alfalfa pasture with access to a self-feeder containing rolled barley and meat meal. It gained 130 pounds at a cost of $6.24 per hundredweight, although this gain was more expensive than that of No. 2 the price that probably would be received at the time he was ready for market would tend to equalize this.

The feed crops meeting took up the subjects of feed reserves, putting up hay, sweet clover, seed varieties and the use of straw on the stock ranch. These exhibits were arranged alongside the coach and were put up in an attractive manner.

The purpose of the train was to stimulate the interest of the banker as well as the ranchman in better stock, and the job now is to follow this up next April with a series of sales of purebred bulls. Unfortunately, this country is a little short in supply of these animals and we will welcome word from anyone located where there is a surplus of the type adapted to our use.

Craig County is the second in the United States and the first in Virginia to eradicate all scrub and grade bulls in the cooperative Better Sires--Better Stock campaign. A recent survey conducted by State and federal workers showed a total of 41 purebred bulls in the county, in marked contrast to 11 years ago when no purebred bulls were present.

CATTLE MARKETING INVESTIGATIONS IN OREGON

By H. A. Lindgren,
Oregon Extension Service.

The producer often holds the key to the successful marketing of his product by supplying the kind of an article that the trade wants. This is especially true in connection with the marketing of cattle

An interesting study of the cattle marketing at the Portland market was made by the writer during the last two years. The object of the study was to determine in what way, if any, the type of cattle could be modified to better suit the needs of the consumer and at the same time bring more profit to the producer.

The things looked for at each visit were the number of cattle that were: (1), In desirable market condition; (2), too thin to market to advantage; (3), too young; (4), of dairy breeding, and (5), of scrub breeding. The outlet for these various grades was also determined, as well as the price received for each grade and class.

The answers arrived at were the result of the investigator's judgment, together with that of the men connected with the trade. As the main market day at Portland is Monday, the visits were made on that day, -- sixteen visits in all at intervals covering as many months. This gave one the opportunity of being present at the time when cattle were being received from a wide range of territory.

The following tables show the number, percentage, and price of different grades of cattle received on the sixteen visits to the Portland market.

CATTLE

Class	Desirable Condition			Too Thin			Too Young			Dairy Breed			Scrub		
	No.	%	Price	No.	%	Price	No.	%	Price	No.	%	Price	No.	%	Price
Steers	7821	48	$8.28	6335	40	$7.33	993	6.5	$6.66	666	4	$6.31	312	1.5	$5.68
Heifers	3032	46	6.91	2031	30.6	6.35	663	10.0	6.39	716	10.8	5.95	168	2.6	5.33
Cows	5217	42	6.30	4134	35.5	5.53	-	-	-	2209	20	4.67	311	2.5	3.44

During this time, the average top price for steers was $8.76, Heifers $7.57, Cows $6.79.

CALVES

Class	Desirable Condition			Too Thin			Too Heavy		
	No.	%	Price	No.	%	Price	No.	%	Price
Beef	1631	53	$11.36	768	25	$7.72	648	22	$6.65
Dairy	1101	48	10.72	669	29	7.34	510	23	6.06

It was found that 48 per cent of the steers received carried condition enough to sell within 50 cents of top price. Forty per cent were too thin and these sold for an average of 95 cents less than those that were in desirable condition. Most of these steers that were classed as too thin could have been made into desirable killers had they carried 100 to 200 pounds more beef. On the other hand, about 40 per cent of the "too thin" kind were of rough type or off quality and could not have been made desirable even with more feed. Consequently, it was considered advisable to dispose of that kind even at the smaller figure. There was a heavier proportion of "thin steers" during the early grass season, which in the northwest territory is in June, July and the first part of August.

About 60 per cent of the "too thin" steers would have made money for the producer if they could have been held on good grass for a period of 60 days longer. This, of cours, is not always possible due to feed and water conditions on some of the ranches.

During October, November, and December, 25 per cent of the steers received were too thin. A goodly proportion of these could have been fed advantageously on hay alone until they carried enough condition to sell as good killers. It cost about 35 cents per hundred pounds live weight each month to feed steers on hay. On the other hand the normal price increase during the winter months is about 20 cents per hundred per month. On that basis the expenditure of three months' feed would have made them good enough to sell for $1.35 to $1.55 more per hundred pounds. This would have paid a nice profit to the producer.

It was found that young steers sold with no handicap if they were fat. If they were too thin their selling price was as much as $1.50 per hundred less than good steers in desirable condition. It is rather difficult for us to market a steer fat under two years old unless he has had grain in rather liberal amounts. Owing to the fact that the Portland market pays only a 35 cent premium on grain-fed cattle, it does not pay the producer to put on a grain finish.

About four per cent of the steers that arrived were of dairy breeding. These brought $1.97 per hundred less than desirable steers. It was due to their quality more than to anything else. Beef-bred steers of the same age brought $25 to $35 more per head than the dairy-bred steers.

Heifers of good quality sold well and were strong competitors with thin steers. These sold as a rule within a dollar and a quarter of the price received for good steers. The thin heifer brought within 56 cents per hundred of the heifers in desirable condition.

Cows coming to Portland were always in demand. Forty-two per cent of them were in desirable condition and brought an average of

$6.30 per cwt. Thirty-five per cent of the cows were too thin and brought $5.53. Dairy cows made up 30 per cent and were sold at an average of $4.67 per hundred. The difference in price between desirable killers and thin cows was 77 cents per hundred, which was probably not enough to justify holding and feeding them for better condition.

There has been a strong tendency to sell calves during the past few years. Our studies show that the price for calves weighing less than 200 pounds was $11.36 per hundred. Thin calves brough $7.72 or $3.64 less per hundred and heavy calves 250 to 400 pounds averaged $6.65 per hundred, or $4.71 less. The heavy kind comprised 22 per cent of the calf offering. A 200-pound vealer brought $22.72; the thin calf of the same weight, $15.44; and the heavy calf $19.95, on the per head basis. The lesson from this is outstanding. If calves must be sold make them fat and do not let them get too heavy. In that way the producer is giving the market what it wants, for which he gets more money.

The whole study points toward the fact that in order to get the most out of our product in the cattle business, it must be in the shape that will suit the consumer's need. It may not always be possible from a financial standpoint to furnish it in that form; on the other hand, it is often possible to make a profit out of the venture where it might otherwise be a loss if we figure ahead on all possibilities.

AN ESSAY ON HABIT

Habit is hard to overcome. If you take off the first letter it does not change "a bit". If you take off another letter you still have a "bit" left. If you take off another, the whole of "it" remains. If you take off another, it is not "t" totally used up, all of which goes to show you must throw it off altogether -- if it's a bad one.

Last year cost account records were collected by the Departments of Animal Husbandry and Farm Organization and Management of the College of Agriculture, University of Illinois, in cooperation with the United States Department of Agriculture. These records from 25 farms in McLean and Woodford counties in a carefully supervised study of the cost of producing pork, confirm the belief that swine sanitation materially reduces the amount of feed required to grow and fatten pigs. Weanling pigs on eight farms where the sanitation system was practiced quite completely required 393.6 pounds of grain and other concentrates to produce 100 pounds of gain, while weanling pigs on eight other farms where no attempt was made to keep pigs out of infested quarters took 500.8 pounds of grain and other concentrates for 100 pounds gain. One might fairly assume from these figures that when corn is fed to wormy pigs one ear out of every five goes to feed the worms.

---From Illinois Animal Husbandry Report - 1926.

SOME RECENT STATE PUBLICATIONS

A Method of Economical Hog Production by E. R. Dudaly -- Texas Extension Circular No. 56.

Pastures for Hogs by L. A. Weaver -- Missouri Experiment Station Circular No. 158.

Construction of Self-Feeders and Their Use in Pork Production by Carrol and Foster -- University of Illinois Circular No. 319.

Summer Finishing of Beef Cattle in Tennessee by L. A. Richardson --Tennessee Extension Publication No. 149.

Factors in Beef Production by H. M. Garlock -- Missouri Extension Circular No. 189.

Steer Feeding Experiments and Actuary by Templeton and Goodell -- Mississippi Experiment Station Bulletin No. 242.

Cattle Feeding by Skinner and King -- Purdue (Indiana) Experiment Station Bulletin No. 314.

Sorgo Silage, Sorgo Fodder and Cottonseed Hulls as Roughages in Rations for Fattening Calves by Jones, Black and Keatin --- Texas Experiment Station Bulletin No. 368.

Cattle Marketing Investigations at Portland, Oregon by Lindgren and Potter -- Oregon Experiment Station Bulletin No. 329.

Feeding Western Lambs by Claude Harper -- Purdue (Indiana) Experiment Station Circular No. 144.

Temporary Pastures for Fattening Spring Lambs by L. J. Horlacher --Kentucky Experiment Station Circular No. 38.

Marketing Kentucky Livestock by E. C. Johnson -- Kentucky Experiment Station Bulletin No. 270.

Trench Silo by Miller and Courtice -- North Dakota Extension Circular No. 76.

Permanent Pastures by M. V. Bailey -- Ohio Extension Bulletin No. 61.